

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1 to 50 (Canceled)

51. (Withdrawn) A method of treating an MKK-mediated disorder in a patient, the method comprising administering to the patient a therapeutically effective amount of a reagent that modulates MKK activity.

52. (Withdrawn) The method of claim 51, wherein the MKK-mediated disorder is selected from the group consisting of ischemic heart disease, kidney failure, oxidative liver damage, respiratory distress syndrome, burns from heat, radiation burns, septic shock, rheumatoid arthritis, autoimmune disorders, and inflammatory diseases.

53 to 55 (Canceled)

56. (Withdrawn) The method of claim 52, wherein the radiation burn is caused by exposure to UV, X-rays,  $\gamma$  particles, or  $\beta$  particles.

57. (Withdrawn) The method of claim 51, wherein the MKK-mediated disorder is a proliferative disorder.

58. (Withdrawn) The method of claim 51, wherein the MKK-mediated disorder is selected from the group consisting of psoriasis, acquired immune deficiency syndrome, and malignancy.

59. (Withdrawn) The method of claim 58, wherein the malignancy is a malignancy of the skin, bone marrow, lung, liver, breast, gastrointestinal system, or genito-urinary tract.

60. (Withdrawn) The method of claim 51, wherein the reagent enhances MKK activity.

61. (Withdrawn) The method of claim 51, wherein the reagent decreases MKK activity.

62. (Withdrawn) The method of claim 51, wherein the reagent inhibits cell growth or causes apoptosis.

63. (Withdrawn) The method of claim 51, wherein the reagent inhibits the secretion of an inflammatory cytokine.

64. (Withdrawn) The method of claim 63, wherein the inflammatory cytokine is a tumor necrosis factor (TNF) or interleukin-1 (IL-1).

65. (Currently Amended) A method of treating ~~an MKK-mediated disorder rheumatoid arthritis~~ in a patient, the method comprising administering to the patient a therapeutically effective amount of a reagent that modulates inhibits mitogen-activated protein kinase kinase 3 (MKK3) MKK activity, wherein the reagent is an antibody that specifically binds to a polypeptide having the amino acid sequence of SEQ ID NO:2 (MKK3).

66. (Withdrawn) The method of claim 51, wherein the reagent is a polypeptide having the amino acid sequence of SEQ ID NO:2 (MKK3), SEQ ID NO:6 (MKK4- $\alpha$ ), SEQ ID NO:8 (MKK4- $\beta$ ), SEQ ID NO:10 (MKK4- $\gamma$ ), or SEQ ID NO:4 (MKK6), or a fragment thereof.

67. (Withdrawn) The method of claim 51, wherein the reagent is an MKK polypeptide that competitively inhibits MKK activity.

68. (Withdrawn) The method of claim 51, wherein the reagent is an antisense nucleic acid or a ribozyme.

69. (Withdrawn) The method of claim 51, wherein the reagent modulates MKK3 activity.

70. (Withdrawn) The method of claim 51, wherein the reagent modulates MKK4 $\alpha$  activity.

71. (Withdrawn) The method of claim 51, wherein the reagent modulates MKK4 $\beta$  activity.

72. (Withdrawn) The method of claim 51, wherein the reagent modulates MKK4 $\gamma$  activity.

73. (Withdrawn) The method of claim 51, wherein the reagent modulates MKK6 activity.

74. (Withdrawn) The method of claim 51, wherein the reagent suppresses MKK phosphorylation of p38, JNK, or ATF2.

75. (New) The method of claim 65, wherein the antibody is a polyclonal antibody.

76. (New) The method of claim 65, wherein the antibody is a monoclonal antibody.